



Practice Guideline:

The Treatment of Tics in People with Tourette Syndrome and Chronic Tic Disorders

Summary for Patients and Their Families

Experts from the American Academy of Neurology carefully reviewed the available evidence about the effectiveness and safety of various treatments as well as the assessment of and counseling for people with tics. The following information provides key details about the evidence as well as a summary of many of the recommendations. For the complete list of recommendations, see the full guideline at AAN.com/guidelines.

What is the key message for me?

There are many effective treatments for tics in people with *Tourette syndrome*. These include drugs and behavioral strategies to manage tics as well as education and watchful waiting. The benefits and risks of these treatments differ. People with Tourette syndrome and their caregivers should work with doctors to find the best treatment options for tics.

Deep brain stimulation, also known as DBS, may benefit patients with severe Tourette syndrome that is resistant to treatment with drugs and behavioral strategies to manage tics. However, this treatment should only be pursued in specialized academic health centers that use teams of doctors from different medical fields.

Recommendation Summary

This section summarizes recommendations for doctors who see patients with Tourette syndrome who have tics. They cover discussions to have and types of treatments. The table on the right explains the different levels of these recommendations.

Recommendation Level	Definition
A (Strong)	There are very strong and compelling reasons to follow this recommendation; it is possible to follow this recommendation in almost all circumstances; and in almost all circumstances, patients would want the course of action described in the recommendation to be followed.
B (Moderate)	There are good and compelling reasons to follow this recommendation; it is generally possible to follow this recommendation; and in most circumstances, patients would want the course of action described in the recommendation to be followed.
C (Weak)	There are reasons to follow this recommendation, but the research supporting this recommendation is weak; the benefits relative to the risks are less certain; the test or treatment is costly; or only some patients would want the course of action described in the recommendation to be followed. Recommendations can be “weak” for a variety of reasons, and these reasons are described in the complete guideline.

Understanding Tourette Syndrome and Chronic Tic Disorders

Doctors must tell people with tics and their caregivers about how tics may improve over time (**Level A**). When people have tics that are not causing problems in daily life, watching and waiting is acceptable (**Level B**). In this situation, doctors may prescribe treatment called comprehensive behavioral intervention for tics (CBIT) for people with tics who want to try treatment (**Level C**). If doctors prescribe medicine for tics, they must check from time to time to make sure the medicine is still needed (**Level A**).

The teachers and peers of people with Tourette syndrome may not understand tic symptoms. Doctors should refer people with Tourette syndrome to organizations that can help teachers and peers understand the disorder (**Level B**).

Testing for and Treating Other Behavior Disorders in Children with Tic Disorders

Children with Tourette syndrome often have attention-deficit/hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD) and anxiety, mood, and disruptive behavior disorders.

Doctors should be sure people with tics are tested for ADHD and OCD (**Level B**) and make sure treatment for both disorders is provided when it is needed (**Level B**).

Doctors must make sure people with tics get tested for anxiety, mood, and disruptive behavior disorders and ask people with Tourette syndrome whether they have thoughts about harming themselves (**Level A**) and refer these people to places that can give the right care (**Level A**).

Treatments for Tourette Syndrome and Chronic Tic Disorders

Doctors must discuss with people who have tics that treatments can help lessen how often tics happen but rarely eliminate all tics (**Level A**).

Doctors should offer CBIT sessions as a first treatment choice instead of medicines or other behavioral treatments for people with tics who have access to CBIT (**Level B**). Doctors should tell people with tics and ADHD that treatment with a type of drug called alpha-2 adrenergic agonists may help lessen symptoms of both conditions (**Level B**). Doctors also should prescribe one of these drugs for tics when there is more benefit than risk (**Level B**).

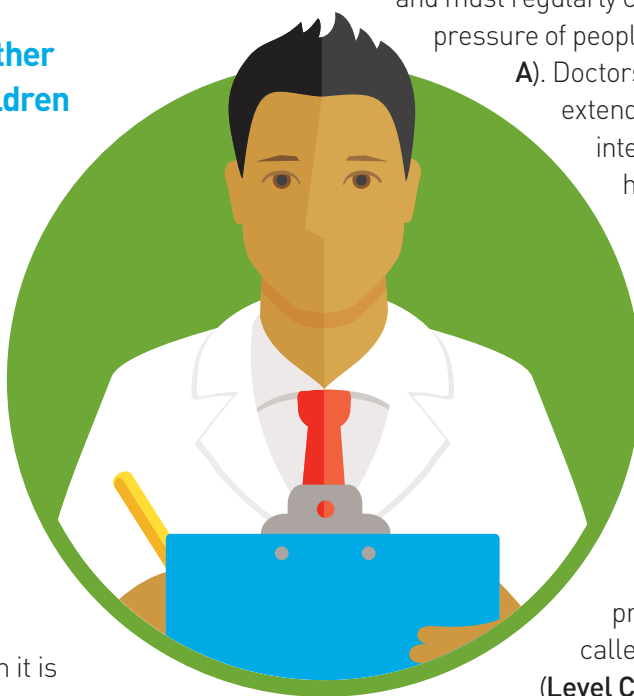
Doctors must discuss possible side effects of alpha-2 adrenergic agonists, including sleepiness (**Level A**), and must regularly check the heart rate and blood pressure of people given these medicines (**Level**

A). Doctors prescribing guanfacine extended release must check the QTc interval in people with a history of heart problems and in people who take other QT-prolonging drugs (**Level A**).

For people who plan to stop their alpha-2 adrenergic agonists, doctors must slowly lower the dose to prevent blood pressure from rising suddenly (**Level A**).

When there is more benefit than risk, doctors may prescribe a type of medicine called antipsychotics to treat tics (**Level C**). However, doctors must discuss possible side effects of these

drugs, including effects on the brain, hormones, and metabolism, with people considering these drugs for treatment of their tics (**Level A**). Doctors who prescribe antipsychotics for tics must prescribe the lowest dose that is effective (**Level A**). They also should regularly check for side effects (**Level B**). Before starting people



Tourette Syndrome and Chronic Tic Disorders —continued

with tics on the antipsychotics pimozide or ziprasidone or giving them other antipsychotics with other drugs that can prolong the QT interval, doctors must do a test called electrocardiography (**Level A**). For people who plan to stop their antipsychotics, doctors should slowly lower the dose to prevent abnormal movements that can occur if the medication is stopped too quickly (**Level B**).

Botulinum toxin is a medicine that is given by injection into the muscles that produce tics. When there is more benefit than risk, doctors may prescribe botulinum toxin for older adolescents and adults with motor tics or severe vocal tics (**Level C**).



When there is more benefit than risk, doctors should prescribe topiramate for treating tics (**Level B**) but must tell people considering these drugs about possible side effects (**Level A**). These include problems with thinking, memory, language, sleepiness, weight loss, and kidney stones.

Some people with Tourette syndrome treat their tics on their own by using cannabis, or marijuana. Because there are risks of using cannabis, doctors who provide medical care for these people must offer to direct them to a doctor who can supervise their use of cannabis for treatment of tics, in places where cannabis is legal (**Level A**).

This guideline was endorsed by the [Child Neurology Society](#) and the [European Academy of Neurology](#).

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